



I-334-T

## MISSISSIPPI FORENSICS LABORATORY



**Lab Case #: 18-018469-0001**

**TOXICOLOGY Report**

Main Laboratory

215 Allen Stuart Dr

Pearl, MS 39208

601-420-9000

FAX: 601-420-9001

**January 02, 2019**

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DMEI Jo Morman

GRENADA COUNTY CMEI

1196 S Mound St

Grenada, MS 38901

662-226-3123

REFERENCE- Agency Case # ME18-1164

VICTIM: Robert D. Loggins

### REQUEST FOR ANALYSIS

On 11/30/2018 it was requested that the TOXICOLOGY section perform the following analysis: Postmortem Reference Lab. This examination was completed on 1/2/2019.

### EVIDENCE

On 11/30/2018 at 2:35 PM, Forensic Scientist Lynce Boackle received the following evidence from the MS STATE MEDICAL EXAMINER via Heather McLendon:

Submission 001	One sealed plastic bag labeled "Robert Loggins" containing biological specimens.
Submission 001-A	Four grey top tubes of blood contained in a sealed plastic bag.
Submission 001-B	One red top tube of vitreous fluid contained in a sealed plastic bag.
Submission 001-C	One red top tube of urine contained in a sealed plastic bag.
Submission 001-D	One red top tube of bile contained in a sealed plastic bag.
Submission 001-E	One specimen container of gastric contents contained in a sealed plastic bag.

### RESULTS

**Submission #: 001**

\*See remark below

Submission 001 was submitted to NMS Labs for analysis. See attached report.

### REMARKS

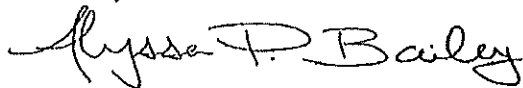
EXHIBIT "L"

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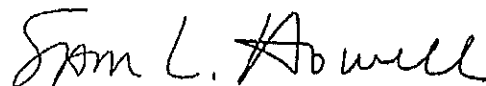
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Case Analyst:



Alyssa Bailey, D-ABFT-FA  
Section Chief - Toxicology

Technical Reviewer:



Sam Howell, F-ABFT  
Director



This report represents the analytical results of the examinations performed on the items of evidence in this case. It should be noted that this report does not represent all documentary items contained in the master file. Should additional material be required for court purposes, please contact the laboratory as soon as possible.

All samples submitted for toxicological examination will be routinely disposed of six (6) months after analyses are completed. If you anticipate that this evidence will be needed, please contact the laboratory to arrange for its return.

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## NMS Labs

3701 Welsh Road, PO Box 433A, Willow Grove, PA 18080-0437

Phone: (215) 657-4900 Fax: (215) 657-2972

e-mail: nms@nmslabs.com

Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

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## Toxicology Report

Report Issued 12/14/2018 17:01

To: 10109  
Mississippi State Medical Examiner Office  
Attn: Sam Howell  
215 Allen Stuart Drive  
Pearl, MS 39208

Patient Name LOGGINS, ROBERT  
Patient ID 18-18469  
Chain 18353214  
Age Not Given DOB Not Given  
Gender Not Given  
Workorder 18353214

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## Positive Findings:

Compound	Result	Units	Matrix Source
Naloxone	Positive	ng/mL	001 - Femoral Blood
Delta-8 Carboxy THC	5.2	ng/mL	001 - Femoral Blood
Delta-9 THC	1.4	ng/mL	001 - Femoral Blood
Amphetamine	43	ng/mL	001 - Femoral Blood
Methamphetamine	600	ng/mL	001 - Femoral Blood

See Detailed Findings section for additional information

## Testing Requested:

Analysis Code	Description
8052B	Postmortem, Expanded, Blood (Forensic)

## Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Miscellaneous Information
001	Gray Top Tube	8.75 mL	Not Given	Femoral Blood	
002	Gray Top Tube	8.75 mL	Not Given	Femoral Blood	
003	Gray Top Tube	8 mL	Not Given	Femoral Blood	
004	Gray Top Tube	6.75 mL	Not Given	Femoral Blood	
005	Red Vial	8.75 mL	Not Given	Urine	
006	Red Vial	4 mL	Not Given	Vitreous Fluid	
007	Red Vial	2.25 mL	Not Given	Bile	
008	White Plastic Container	70 mL	Not Given	Gastric Fluid	THICK, DARK BROWN FLUID WITH BITS, pH=4

All sample volumes/weights are approximations.

Specimens received on 12/06/2018.

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## Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Naloxone	Positive	ng/mL	1.0	001 - Femoral Blood	LC/TOF-MS
Delta-9 Carboxy THC	5.2	ng/mL	5.0	001 - Femoral Blood	LC-MS/MS
Delta-9 THC	1.4	ng/mL	0.50	001 - Femoral Blood	LC-MS/MS
Amphetamine	43	ng/mL	5.0	001 - Femoral Blood	LC-MS/MS
Methamphetamine	600	ng/mL	5.0	001 - Femoral Blood	LC-MS/MS

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

## Reference Comments:

## 1. Amphetamine - Femoral Blood:

Amphetamine (Adderall, Dexedrine) is a Schedule II phenethylamine CNS-stimulant. It is used therapeutically in the treatment of narcolepsy and obesity and also in the treatment of hyperactivity in children. Amphetamine has a high potential for abuse. When used in therapy, initial doses should be small and increased gradually. In the treatment of narcolepsy, amphetamine is administered in daily divided doses of 5 to 60 mg. For obesity and children with attention deficits, usual dosage is 5 or 10 mg daily.

Following a single oral dose of 10 mg amphetamine sulfate, a reported peak blood concentration of 40 ng/mL was reached at 2 hr. Following a single 30 mg dose to adults, an average peak plasma level of 100 ng/mL was reported at 2.5 hr. A steady-state blood level of 2000 - 3000 ng/mL was reported in an addict who consumed approximately 1000 mg daily.

Overdose with amphetamine can produce restlessness, hyperthermia, convulsions, hallucinations, respiratory and/or cardiac failure. Reported blood concentrations in amphetamine-related fatalities ranged from 600 - 41000 ng/mL (mean, 9000 ng/mL). Amphetamine is also a metabolite of methamphetamine, benzphetamine and selegiline.

## 2. Delta-9 Carboxy THC (Inactive Metabolite) - Femoral Blood:

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10 - 101 ng/mL attained 32 to 240 minutes after beginning smoking, with a slow decline thereafter. The ratio of whole blood concentration to plasma concentration is unknown for this analyte. THCC may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

## 3. Delta-9 THC (Active Ingredient of Marijuana) - Femoral Blood:

Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. It rapidly leaves the blood, even during smoking, falling to below detectable levels within several hours. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC and may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THC concentrations in blood are usually about one-half of serum/plasma concentrations. Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50 - 270 ng/mL at 6 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs.

## 4. Methamphetamine - Femoral Blood:

d-methamphetamine is a DEA schedule II stimulant drug capable of causing hallucinations, aggressive behavior and irrational reactions. Chemically, there are two forms (isomers) of methamphetamine: l- and d-methamphetamine. The l-isomer is used in non-prescription inhalers as a decongestant and has weak CNS-stimulatory activity. The d-isomer has been used therapeutically as an anorexic agent in the treatment of obesity and has potent CNS-, cardiac- and circulatory-stimulatory activity. Amphetamine and norephedrine (phenylpropanolamine) are metabolites of methamphetamine. d-methamphetamine is an abused substance because of its stimulatory effects and is also addictive.

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## Reference Comments:

A peak blood concentration of methamphetamine of 20 ng/mL was reported at 2.5 hr after an oral dosage of 12.5 mg. Blood levels of 200 - 600 ng/mL have been reported in methamphetamine abusers who exhibited violent and irrational behavior. High doses of methamphetamine can also elicit restlessness, confusion, hallucinations, circulatory collapse and convulsions.

\*In this case, the level of methamphetamine determined has not been differentiated according to its isomeric forms. Differentiation of the isomers of methamphetamine is available upon request.

## 6. Naloxone (Narcan®) - Femoral Blood:

Naloxone is a narcotic antagonist used to counter the central nervous system depression effects of opioids, including respiratory depression. It is also used for the diagnosis of suspected acute opioid overdosage. Naloxone is available as a 0.4 mg/mL solution of the hydrochloride for parenteral injection.

Naloxone is also available in combination with buprenorphine (Suboxone®) for the treatment of opioid dependence. This combination is available in tablets of 2 mg buprenorphine with 0.5 mg naloxone or 8 mg buprenorphine with 2 mg of naloxone for sublingual administration.

The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) months from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Workorder 18353214 was electronically signed on 12/14/2018 16:02 by:

William M. Schroeder, M.S.  
Certifying Scientist

## Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

## Acocde 52198B - Cannabinoids Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
11-Hydroxy Delta-9 THC	1.0 ng/mL	Delta-9 THC	0.50 ng/mL
Delta-9 Carboxy THC	5.0 ng/mL		

## Acocde 62485B - Amphetamines Confirmation, Blood - Femoral Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Amphetamine	5.0 ng/mL	Norpseudoephedrine	5.0 ng/mL
Ephedrine	5.0 ng/mL	Phentermine	5.0 ng/mL
MDA	5.0 ng/mL	Phenylpropanolamine	5.0 ng/mL
MDEA	5.0 ng/mL	Pseudoephedrine	5.0 ng/mL
Methamphetamine	5.0 ng/mL		

## Acocde 8052B - Postmortem, Expanded, Blood (Forensic) - Femoral Blood

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 Chain 18353214  
 Patient ID 18-18469

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**Analysis Summary and Reporting Limits:**

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Barbiturates	0.040 mcg/mL	Salicylates	120 mcg/mL
Cannabinoids	10 ng/mL		

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnotics/Sedatives, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

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